SERIAL 03079 IGA TRAFFIC SIGNAL LED MODULES, CITY OF MESA CONTRACT 2002169

DATE OF LAST REVISION: November 22, 2005 CONTRACT END DATE: September 30, 2007

CONTRACT PERIOD BEGINNING OCTOBER 01, 2002
ENDING ~~SEPTEMBER 30, 2005~~
SEPTEMBER 30, 2007

TO: All Departments

FROM: Department of Materials Management

SUBJECT: Contract for **TRAFFIC SIGNAL LED MODULES, CITY OF MESA CONTRACT 2002169**

Attached to this letter is a listing of vendors available to Maricopa County Agencies utilizing the **CITY OF MESA CONTRACT 2002169**. The using agency and other interested parties may access and electronic version of this contract from the Materials Management Web site at:

http://www.maricopa.gov/materials/Awarded_Contracts/search.asp.

Please note: Price Agreement Purchase Orders (PG documents) may be generated using the information from this list. Use Commodity Code(s) B0604572.

All purchases of product(s) listed on the attached pages of this letter are to be obtained from the listed contractor(s).

_____

Bidder's Name

SUPPLY CONTRACT FOR
TRAFFIC SIGNAL LED MODULES
(REQUEST FOR BID #2002169)

BID FORM

City of Mesa Purchasing Division
20 E. Main Street, Suite 150
P. O. BOX 1466
Mesa, AZ 85211-1466

We propose to furnish you with the following described materials as per your Request for Bid #2002169.

LED MODULES

Item No.	Est. Quantity	Description	City Stock No.	Unit Price*	Total Price*
1	160 ea.	Module, LED, 8", Red (per LED module specifications dated April 20, 2001)	58161	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 88 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
2	20 ea.	Module, LED, 8", Yellow (per LED module specifications)	58162	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 0 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
3	160 ea.	Module, LED, 8", Green (per LED module specifications)	58163	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 91 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
4	955 ea.	Module, LED, 12", Red (per LED module specifications)	58164	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 600 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			

Item No.	Est. Quantity	Description	City Stock No.	Unit Price*	Total Price*
5	20 ea.	Module, LED, 12", Yellow (per LED module specifications)	58165	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 0 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
6	955 ea.	Module, LED, 12", Green (per LED module specifications)	58166	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 616 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
7	230 ea.	Module, LED, 12", Arrow Red (per LED module specifications)	58167	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 253 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
8	20 ea.	Module, LED, 12", Arrow Yellow (per LED module specifications)	58168	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 0 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
9	361 ea.	Module, LED, 12", Arrow Green (per LED module specifications)	58169	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 341 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			

Item No.	Est. Quantity	Description	City Stock No.	Unit Price*	Total Price*
10	535 ea.	Pedestrian Module, LED, Symbol (per LED module specifications)	58213	$	$
		Manufacturer/Part # : Standard Packaging: Shipping Schedule: Upon receipt of this purchase order, ship 435 immediately to Transportation's delivery adress. Balance will be ordered as needed by Materials & Supply.			
		Delivery Time in Days: _____ Warranty in Years: _____			
		***TOTAL BID:**		**$**	

* FOB Destination; City to add applicable sales or use tax.

This bid is subject to acceptance for _____ days (not less than 90 days).

Payment terms are: _____ (not less than net 30 days).

Does bidder agree to honor the prices, terms and conditions to other agencies as specified in section 1.12?
_____ Yes _____ No (A "no" answer will not disqualify your bid.)

I hereby certify, by my signature below, that I have read and understand the terms and conditions stated herein, as well as its attachments, and any referenced documents. I further certify that the company I represent will accept such terms and conditions in a resulting contract if selected by the City of Mesa.

I certify that I am an officer or duly authorized agent of the bidder named below with full power and authority to submit binding offers for the goods or services as specified herein.

I certify that the prices offered were independently developed without consultation or collusion with any of the other Bidders or potential Bidders, and without any offer of gifts, payments, or other consideration to any City employee, officer, elected official, or consultant who has or may have had a role in the procurement process for the services and/or goods/materials covered by this RFB.

My signature below certifies that my company agrees to the above requirements.

BIDDER NAME/ADDRESS (for order):

_____ _____
Firm Signature

_____ _____
Address By (please print)

_____ _____
City, State, Zip Title

(___)_____ _____
Telephone Number Date

(___)_____
Fax Number

_____
e-mail address

REMITTANCE NAME/ADDRESS (for payments):

_____ Same as above

_____
Firm

_____
Address

_____
City, State, Zip

(___)_____
Telephone Number

SALES/USE TAX INFORMATION:
(Not Required for Service Contracts)

_____ Bidder is located outside Arizona (the City will pay Arizona use tax directly to the Arizona Department of Revenue)

_____ Bidder is located in Arizona (the City will pay sales tax)

State Sales Tax No. _____

City Sales Tax No. _____

for City of _____, AZ

SUPPLY CONTRACT FOR TRAFFIC SIGNAL LED MODULES
(REQUEST FOR BID #2002169)

INSTRUCTIONS TO BIDDERS

The estimated quantities listed on the Bid Form include items needed for immediate delivery and quantities needed for ongoing maintenance replacement over a twelve month period.

Delivery Instructions

1) Quantities for immediate shipment shall be delivered to:

City of Mesa Transportation
Traffic Signal Shop – Bill Hansing
300 East Sixth Street
Mesa, Arizona 85201

Call 24 hours before delivery – (480) 644-3129

2) Additional quantities will be ordered as needed by the City of Mesa Materials and Supply Division. Delivery address:

City of Mesa
Materials & Supply
316 East Sixth Street
Mesa, Arizona 85201

Standard Packaging

Please indicate on the Bid Form the standard case quantities. City of Mesa will order full cases only.

Additional Purchases

The quantities listed on the Bid Form are for use by the City of Mesa. While quantities cannot be guaranteed by the City of Mesa, the following agencies have expressed interest in participating in this bid:

Agencies	Estimated Annual Purchases
Maricopa County	$75,000
City of Glendale	$75,000
City of Scottsdale	$25,000

SUPPLY CONTRACT FOR TRAFFIC SIGNAL LED MODULES
(REQUEST FOR BID #2002169)

SPECIAL PROVISIONS

Price Reduction

By submitting a bid or proposal, vendors agree to guarantee that the City of Mesa and participating agencies are receiving the lowest price offered by your company to other customers for similar items at comparable volumes in a similar geographic area. If at any time during the contract period your company offers a lower price to another customer, notification not made of price reductions, upon discovery, the City of Mesa shall reserve the right to take any or all of the following actions:

1. Cancel the contract, if it is currently in effect.

2. Determine the amount, which the City was overcharged and submit a request for payment from the vendor for that amount.

SUPPLY CONTRACT FOR TRAFFIC SIGNAL LED MODULES
(REQUEST FOR BID #2002169)

REVISED APRIL 20, 2001

SPECIFICATIONS

Purpose
The purpose of this specification is to provide the minimum performance requirements for 300 mm (12 inch) and 200 mm (8 inch) LED traffic signal modules, and 12-inch pedestrian signal modules (international symbol type). This specification refers to definitions and practices described under "Vehicle Traffic Control Signal Heads" (VTCSH) and "Pedestrian Traffic Control Signal Indications" (PTCSI) as published in the *Equipment and Materials Standards of the Institute of Transportation Engineers* (document ISBN 0-935403-16-7 may be purchased online from **www.ite.org** refer to item ST-017A).

Definitions
The following definitions are in addition to the definitions in the VTCSH.

1. **Nominal Operating Voltage**. The AC RMS voltage, 117VAC, at which photometric performance and power consumption are specified.
2. **Chromaticity**. The color of the light emitted by an LED signal module, specified as x-y chromaticity coordinates on the chromaticity diagram according to the 1931 Commission Internationale d'Eclairage (CIE) standard observer and coordinate system.
3. **Power Factor (PF)**. PF equals Watts divided by volt-ampere (VA) or the ratio of power consumption in Watts to volt-amperes.
4. **Total Harmonic Distortion (THD)**. THD is the ratio of the root-mean-square (RMS) value of the harmonics, to the amplitude of the fundamental component of the AC waveform.

General Description
Referenced vehicle type LED retrofit modules shall fit in all standard, incandescent vehicle traffic signal housings. These modules are to be used for the replacement of the reflector, socket, gasket, and lens assembly of an incandescent vehicle signal indication. Each retrofit module shall be complete, consisting of:

- A lens
- LED circuit board inclusive of all of the LEDs and required circuit components
- 36 inch 16 AWG wire leads with strain relief and **quick connect terminals**
- A rigid housing for protection in shipping, handling and installation
- A one-piece neoprene gasket.

Vehicle type LED retrofit modules covered by this specification include the following types:

- 200 mm (8 inch) Red
- 200 mm (8 inch) Yellow
- 200 mm (8 inch) Green
- 300 mm (12 inch) Red
- 300 mm (12 inch) Yellow
- 300 mm (12 inch) Green
- 300 mm (12 inch) Red Arrow
- 300 mm (12 inch) Yellow Arrow
- 300 mm (12 inch) Green Arrow

Pedestrian Signal Module

The pedestrian LED traffic signal module shall be designed as a retrofit replacement for the message of a 400 mm (16 inch) by 450 mm (18-inch) pedestrian signal housing built to the PTCSI Standard. The "HAND" and "MAN" symbol shall be 300 mm (12 inches) in height, and conform to PTCSI Standards. Pedestrian LED signal modules shall be designed so, that when operated over the specified ambient temperature and voltage range, the signal shall attract the attention of, and be readable to, a viewer (both night and day) at all distances from 3 meters to 60 meters (9.8 feet to 196.9 feet). The measured chromaticity coordinates of the LED pedestrian signal module shall conform to the chromaticity requirements of Section 5.3 and Figure C of the PTCSI standard.

The LED pedestrian signal module shall be man/hand overlay with outline figures for both the man and hand. Filled-in and/or side-by-side modules shall **NOT** be used.

The LED pedestrian signal module shall conform to all other specifications in this document, where applicable.

The LED signal module shall be rated for use in the ambient operating temperature range, measured at the exposed rear of the module, of –40°C to +74°C (-40°F to +165°F).

The LED signal module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, Section 4.7.2.l and 4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electronic components.

The LED signal module lens shall be UV stabilized and scratch resistant.

Construction

The external lens surface for all vehicle signals shall be smooth, with no raised features, so as to minimize the collection of dirt, diesel smoke, and other particulate contaminates, and to facilitate periodic cleaning. External lens facets are not allowed. The LED signal module lens shall be UV stabilized and scratch resistant.

The LEDs shall be mounted and soldered to a printed circuit board. The LED signal module shall be watertight when properly mounted in an installed traffic signal housing. The LED signal module shall utilize the same mounting hardware used to secure the incandescent lens and gasket assembly and only require a screwdriver or standard installation tool to complete the mounting into an existing traffic signal housing built to the VTCSH Standard. Unit shall connect to existing electrical wiring utilizing **quick connect terminals**.

The LED signal module shall be a single, self-contained device, not requiring on-site assembly for installation into an existing traffic signal housing. The power supply for the LED signal module shall be an integral part of the module. The LED signal module assembly shall weigh less than 5 pounds.

The assembly and manufacturing process for the LED signal module shall be designed to assure all internal LED and electronic components are adequately supported to withstand mechanical shock and vibration from high winds and other sources.

When necessary, modules shall have a prominent and permanent vertical indexing indicator, i.e., UP ARROW or the word UP or *TOP,* for correct indexing and orientation inside signal housing**.**
Each individual LED signal module shall be identified for Warranty purposes and clearly marked with:

- Manufacturer's name
- Date of manufacture.
- Unit serial number.
- Nominal operating voltage
- Power consumption in Watts

Environmental

The LED signal module shall operate over the temperature range of -40°C to +74°C (-40°F to +165°F). The LED signal module shall be protected against dust and moisture intrusion per the requirements of NEMA Standard 250-1991, Section 4.7.2.l and 4.7.3.2, for Type 4 enclosures to protect all internal LED, electronic, and electronic components.

Electrical - Input

LED signal modules shall operate from a 60 +/-3 cycle AC line power over a voltage range from 80 VAC RMS to 135 VAC RMS. The control circuitry shall prevent current flow through the LEDs in the off state to avoid any false indication as may be perceived by the human eye. The LED traffic signal module shall be operationally compatible with NEMA TS - 1 and NEMA TS - 2 *conflict monitoring* parameters.

Green LED signals shall not illuminate for input voltages below 35 VAC RMS and shall illuminate for all input voltages higher than 45 VAC RMS (voltage shall be regulated above 80 VAC RMS). This requirement is so that a green indication will not illuminate due to a "floating" or high-impedance neutral connection.

All wiring and terminal blocks shall meet the requirements of Section 13.02 of the VTCSH standard. Two secured, color coded, 914 mm (36 in) long 600 V, 20 AWG minimum, jacketed wires, conforming to the National Electrical Code, rated for service at +105°C (+221°F), are to be provided for electrical connection.

The signal module on-board circuitry shall include voltage surge protection to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.6, NEMA Standard TS-2, 1992.

The individual LED light sources shall be wired so that a catastrophic failure of one LED light source will result in the loss of not more than 5 percent of the signal module light output. One LED failure in an LED Signal Module will not affect any other LEDs. In case of a failure of one LED, only one LED will be lost and not an entire string or module.

Power factor shall be 90% or greater, at nominal rated voltage, at 25°C (77°F), after 60 minutes of operation.

Total harmonic distortion induced into an AC power line by an LED signal module, operated at nominal operating voltage, with a power consumption equal to or greater than 15 watts at 25^0C (77^0F) shall not exceed 20 percent. Total harmonic distortion induced into an AC power line by an LED signal module, operated at nominal operating voltage, with a power consumption less than 15 watts at 25^9C (77°F') shall not exceed 40 percent.

The LED signal and associated on-board circuitry must meet Federal Communications Commission (FCC) Title 47, subpart B, Section 15 regulations concerning the emission of electronic noise.

Optical - Output

The light intensity and distribution from LED signal modules shall as a minimum, meet the current ITE and CAL TRANS standards and measurement criteria for vehicle traffic control, even after a 30 minute warm up of continuous operation. Test data to verify the performance as meeting the ITE intensity requirements at +74°C (+165°F) shall be supplied from either of the following (or another certified **independent** test lab):

Lighting Sciences
7630 East Evans Road
Scottsdale, AZ 85260

ETL Testing Laboratories
3933 US Route 11
Cortland, NY 13045-0950

The light output of all LED vehicle signal modules shall also meet *ITE* specifications for chromaticity.

Fluctuations in line voltage over the range of 80 VAC to l35 VAC shall not affect luminous intensity by more than +/- 10 percent.

LED traffic signals shall be temperature compensated so as to maintain intensity at elevated temperatures. LED traffic signal shall be tested and documented by CAL TRANS as being in compliance with CAL TRANS intensity standards at elevated temperatures.

The LEDs shall not exhibit degradation of more than 30% of their initial light intensity following accelerated life testing (operating at +85°C (+185°F) and 85% humidity, for 1000 hours). AlGaAs technology is not acceptable.

Warranty

All LED traffic signal modules supplied shall be warranted for 5 years against manufacturing defects.

LED traffic signal modules shall be performance warranted to be in compliance with ITE and CAL TRANS minimum intensity standards, at +74°C (+165°F), after a period of three (3) years, measured at 117 volts AC.

Failures due to acts of God, abuse, and accidents are excluded from warranty coverage.

Vendor expressly warrants that all goods furnished shall conform to all specifications and appropriate standards, will be new, and will be free from defects in material or workmanship. Vendor warrants that all such goods will conform to any statements made on the containers or labels or advertisements for such goods and that any goods will be adequately contained, packaged, marked and labeled. Vendor warrants that all goods furnished will be merchantable, and will be safe and appropriate for the purpose for which goods of that kind are normally used. If Vendor knows or has reason to know the particular purpose for which City intends to use the goods, Vendor warrants that such goods will be fit for such particular purpose. Vendor's warranty shall run to City, its successors, and assigns. Vendor agrees to replace or correct defects of any goods not conforming to the foregoing warranty promptly, without expense to City, when notified of such nonconformity by City, provided City elects to provide Vendor with the opportunity to do so. In the event of failure of Vendor to correct defects in or replace nonconforming goods promptly, City, after reasonable notice to Vendor, may make such corrections or replace such goods and charge Vendor for the cost incurred by City in doing so

CITY OF MESA
Great People, Quality Service!

City Council Report

Date: August 29, 2005

To: City Council

Through: Mike Hutchinson, City Manager
Debra Dollar, Deputy City Manager

From: Richard A. Lorig, General Services Manager

Subject: Two-year renewal of Supply Contract for Traffic Signal LED Modules for Warehouse Inventory as requested by the Transportation Division. (Contract 2002169)
"Citywide" contract

Purpose and Recommendation

The Council is requested to approve this contract as recommended. The renewal was evaluated by the Purchasing Division.

The Purchasing Division recommends authorizing the two-year contract renewal with Dialight Corporation at $352,907.07 annually, based on estimated requirements. The vendor has offered to decrease their prices with an average overall decrease of 5%.

Background

LED modules are used to replace signalized red, green and pedestrian incandescent lamps. Switching over to LED modules has resulted in less maintenance and offers energy cost savings as well.

Alternatives

Council may elect not to exercise this renewal option and new bids will be obtained.

Five responsive bids were received September 2002.

Fiscal Impact

The total recommended award is $352,907.07 annually, based on estimated requirements. Funds are budgeted for this purchase on page C95, object code 74899, "Stores Inventory Purchase", $4,179,825.00 available.

Concurrence

The following staff member(s) concur with the Purchasing Division's recommendation:

Joan Baier, Purchasing Administrator
John Albin, Materials & Supply Administrator
Jan Siedler, Signal Systems Supervisor
Bill Hansing, Traffic Signal Foreman
Jeff Kramer, Transportation Director

Edward Quedens,
Materials Management Director

Debra Dollar,
Deputy City Manager

Richard A. Lorig,
General Services Manager

Mike Hutchinson,
City Manager

RENEWAL RECOMMENDATION
SUPPLY CONTRACT FOR TRAFFIC SIGNAL LED MODULES
(REQUEST FOR BID #2002169)

Item No.	Qty	Description	Dialight Corporation Farmingdale, NJ
1	218 ea.	Module, LED, 8", Red (per LED module specifications dated 4/20/01)	$7,630.00
2	20 ea.	Module, LED, 8", Yellow (per LED module specifications)	780.00
3	218 ea.	Module, LED, 8", Green (per LED module specifications)	12,426.00
4	1186 ea.	Module, LED, 12", Red (per LED module specifications)	48,626.00
5	20 ea.	Module, LED, 12", Yellow (per LED module specifications)	950.00
6	1171 ea.	Module, LED, 12", Green (per LED module specifications)	105,390.00
7	242 ea.	Module, LED, 12", Arrow Red (per LED module specifications)	9,196.00
8	20 ea.	Module, LED, 12", Arrow Yellow (per LED module specifications)	830.00
9	449 ea.	Module, LED, 12", Arrow Green (per LED module specifications)	30,981.00
10	677 ea.	Pedestrian Module, LED, Symbol (per LED module specification)	73,793.00
		TOTAL BID	**$290,602.00**
		15% for contingencies	43,590.30
		Sub-Total	**$334,192.30**
		5.6% Use Tax	18,714.77
		GRAND TOTAL	**$352,907.07**

CITY OF MESA PURCHASING
P.O. BOX 1466
MESA, AZ 85211-1466
480-644-2301
ACCTS PAYABLE 480-644-2355

PURCHASE ORDER

Correct purchase order and stock numbers must appear on all packages, invoices, shipping papers and correspondence. Packing slips must accompany all shipments.

INV TO
CITY OF MESA
P.O. BOX 1466
MESA, ARIZONA 85211-1466

ATTN: Materials & Supply #290

PURCHASE ORDER	PAGE	REPRINT
0000337428	1	

BLANKET RELEASE	CHANGE NOTICE
1	

VENDOR NUMBER	TAX CERTIFICATION NUMBER
575623	

TO
DIALIGHT CORP

1501 ROUTE 34 SOUTH
FARMINGDALE NJ 07727

SHIP TO
CITY OF MESA MATERIAL & SUPPLY
WAREHOUSE
316 E. 6TH STREET
P.O. BOX 1466
MESA, AZ 85211-1466
480-644-2393

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
09/27/2005	NET 30 DAYS	BEST WAY	FOB DESTINATION	FOB DESTINATION

LINE	QUANTITY UOP / ITEM NUMBER	DESCRIPTION / DATE DUE	UNIT PRICE	AMOUNT
0001	1 EA 578	FIRST YEAR OF TWO YEAR RENEWAL FOR SUPPLY CONTRACT 09/30/2006 FOR TRAFFIC SIGNAL LED MODULES. PER SPECIFICATIONS OF BID 2002169 AND YOUR RENEWAL BID DATED 07/28/2005. FIRST YEAR CONTRACT TO BE: 10/01/2005 THROUGH 09/30/2006 FIRST YEAR TOTAL NOT TO EXCEED: $352,907.07	0.00000	0.00

ADDITIONAL COST	0.00
TAX	0.00
TOTAL	0.00

By Richard A. Lorig
Richard A. Lorig

CJB

PURCHASING COPY